

REMARKS

The Examiner is thanked for the examination of the application, and for the interview granted Applicants' attorney on February 17, 2010. The substance of the interview is set forth in the following remarks. In view of the remarks that follow, the Examiner is respectfully requested to reconsider and withdraw the rejections.

35 USC 101:

Claim 5 has been rejected under 35 USC 101 as allegedly not falling within one of four statutory categories of invention, citing *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008). As suggested by the Examiner at the interview, claim 5 has been amended to recite a memory for storing the pattern.

Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejections under 35 USC 101.

Art Rejections:

Claims 1, 4, 5, 8, and 9 have been rejected under 35 USC 103(a) as being unpatentable over USP 6,952,492, hereinafter *Tanaka*, in view of EP 0643293, hereinafter *Toshiba*.

Claims 1, 5, 8, and 9 recite that the master pattern includes four corner pattern portions and four side pattern portions. Each of the four corner pattern portions (represented in the preferred embodiments as 17a-17d) has two perpendicular edges defining the respective corner portion. And, each of the four side pattern portions (represented in the preferred embodiments as 17e-17h) has a

straight edge portion defining a vertical edge or a horizontal edge. However, the present invention is not limited to the preferred disclosed embodiments.

Claim 1 further recites "***moving each of the side pattern portions*** relative to the inspection view areas along a peripheral portion of the inspection area having the repeated patterns between respective corner pattern portions, so as to be applied to respective matching inspection view areas of the peripheral portion".

During the interview, Applicants' attorney explained that the *Toshiba* reference actually taught away from using the Direct Comparison Circuit 10 of the prior art, and therefore that portion of *Toshiba* should not be combined with *Tanaka*. In response, the Examiner took the position that the *Tanaka* reference requires a "direct match" between the positions of patterns and the chip being analyzed, and that the invention of *Toshiba* does not require a direct match. However, the Examiner further explained that the prior art portion of *Toshiba* (i.e., the Direct Comparison Circuit 10) does require a direct match, and therefore is properly combinable with *Tanaka*. After reviewing *Tanaka*, it is not clear why the Examiner is of the opinion that *Tanaka* requires a "direct match. Furthermore, as explained below, if *Tanaka* requires a direct match, it is fundamentally different than the claimed invention.

The Examiner's attention is directed to the published version of the present application, and in particular to the last sentence in paragraph [0012], to the last sentence in paragraph [0038], and to the description in paragraph [0039] concerning "no severe positional alignment needs not be done..." These sections imply that the present invention does not require a "direct match". This of course would be different than the position that the Examiner has taken with regard to *Tanaka*. This feature is brought out in claim 1 in the "moving each of the side pattern portions..."

element, and which is described at paragraph [0034] of the published application.

However, the present invention is not limited to the preferred disclosed embodiments.

In the last rejection, with regard to the "moving" element, the Examiner refers to column 7, lines 30 - 40, of *Tanaka*. See the last four lines on page 5 of the December 30, 2009 Office Action. However, this position seems particularly hard to accept since the Examiner takes the position that *Tanaka* does not teach the side pattern portions.

Furthermore, this feature cannot be taught by *Toshiba*, because, as taught at column 4, lines 52 - 55, the prior art section of *Toshiba* appears to require a direct match. This was acknowledged by the Examiner at the interview.

Accordingly, Applicants submit that the rejection of the present application is improper and should be withdrawn.

As carefully explained in paragraph [0007] of the published application, the present invention is intended to overcome a problem used when inspections were made using only straight edge portions. If the straight edge portions extended beyond the corner of the view area of the chip, an erroneous rejection was made. As explained in paragraph [0013] of the published application, because the master pattern includes corner portions as well as straight portions, the straight portions can be used repeatedly across the straight edges of the chip until it reaches the corner, and the corner portions are used to inspect the corners of the chip. As a result, the straight portions cannot erroneously extend beyond the corners of the chips and give false rejections.

By including each of the four corner pattern portions and each of the four side pattern portions of the master pattern as described above, the nine standard pattern portions of the master pattern can be easily matched with the inspection view areas, respectively, without requiring severe positional alignment.

See, for example, paragraph [0039] of the published application, which states:

To the contrary, according to the present invention of this application, since the information on the edge shapes and the exterior areas are correspondingly contained in the standard pattern portions 17a to 17h on the peripheral portion excluding the central pattern portion 17i, no severe positional alignment needs not be done unlike in the prior art. Therefore, the peripheral standard pattern portions 17a to 17h can be positionally aligned at a relatively large allowable error, that is, with the same allowable error as in the case of the central pattern portion 17i, so that erroneous judgment due to the error in this alignment is avoided. As a result, the occurrence of the erroneous judgment due to the error in arrangement of the standard pattern portion 17a to 17h constituting the master pattern 17 is avoided, and the effective surface inspection can be performed.

Accordingly, it is the combination of **both** the corner pattern portions and the side pattern portions that enables the present invention to work both efficiently and accurately, minimizing false or erroneous rejections.

On the other hand, in *Tanaka*, only five checking positions including four corners and a center are disclosed. Therefore, *Tanaka* does not disclose the four corner pattern portions and the four side pattern portions as in the present invention.

The Office Action tries to overcome this deficiency by relying on *Toshiba* for allegedly teaching "edge detection". However, "edge detection" is not what is missing from *Tanaka*. What the prior art does not teach, either singly or in combination, is the concept of using **both** the corner pattern portions and the side pattern portions so that the inspection can take place efficiently, and without the risk of the side pattern portions running past the corners and giving erroneous rejections.

Therefore, Applicants submit that the present invention significantly differs from the technology described in *Tanaka* and *Toshiba* in the structure and technical effect, and is not easily made based on the technical matters set forth in the applied art. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejections.

The remaining claims are patentable for similar reasons.

In the event that there are any questions concerning this Amendment, or the application in general, the Examiner is respectfully urged to telephone the undersigned attorney so that prosecution of the application may be expedited.

Respectfully submitted,

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